Policy Analysis Focus 24-1
Potential Economic Impact of India joining CPTPP[1]

April 2024

Kenichi Kawasaki
Professor, GRIPS Alliance, National Graduate Institute for Policy Studies (GRIPS)

I. Introduction

India was about to become the largest country in the world in terms of population in 2023, surpassing China, according to the data from the United Nations Population Fund (UNFPA). That said, India withdrew from the Regional Comprehensive Economic Partnership (RCEP) and did not join Indo-Pacific Economic Framework for Prosperity (IPEF) negotiations on trade, one of the four pillars of IPEF (though it is not a legally binding standard trade agreement).

This article investigates the potential economic impact of India joining the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) in conjunction with the participation of the United States (US) and/or China, the two largest economies in the world in terms of GDP. The investigation is conducted by means of simulation studies using a computable general equilibrium (CGE) model of global trade based on the most recent trade database and tariff data.

II. Simulation framework

This simulation study draws on the Global Trade Analysis Project (GTAP) 11b Data Base, released in December 2023, a second bug fix of the GTAP 11 Data Base. The baseline GDP and population data updates 2017 GTAP 11 Data Base data to include 2023 entries in the World Economic Outlook (WEO) Database, October 2023 of the International Monetary Fund (IMF). China, India and the US grew by around 40% from 2017 to 2023 in terms of current US dollars, but Japan shrank by 14% in that period, resulting in Japan's relegation to fourth in the world, after Germany. The significance of

---

[1] This study is an extension of Kawasaki, K. (2023), "Review of Economic Impact of CPTPP," GRIPS Discussion Paper 23-10, GRIPS, October 2023. The views expressed in this article are the author's own and do not represent those of GRIPS Alliance or other organizations to which the author belongs.

estimated economic impact depends to some extent on the relative sizes of those economies.

The tariff data is updated based on the Market Access Map (MAcMap) of the International Trade Centre (ITC), which provides the tariff reduction schedules of existing economic partnership agreements (EPAs), from those in the GTAP Data Base in 2017 (before CPTPP and RCEP entered into force). This means that the baseline tariff data for the reference scenario of policy simulations presented below is based on the eventual implementation of EPAs, along with those entered into force up to 2022, including the Australia–India Economic Cooperation and Trade Agreement (ECTA) entered into force in December 2022. Simulation outcomes are also dependent on those baseline scenarios.

The GTAP 7 Model is solved in this study using GEMPACK software.[2] Dynamic effects of capital accumulation, endogenous labor supply and productivity improvement are incorporated into the static version of the GTAP model. The magnitudes of estimated economic impacts are several times larger than the impacts estimated in the majority of other studies based on assumptions including capital effects, but not necessarily labor and productivity effects.

The economic impact of the removal of remaining tariffs will be compared here across five scenarios: 1) India joining RCEP; 2) India joining CPTPP; 3) India joining CPTPP after the US; 4) India joining CPTPP after China; and 5) India joining CPTPP after the US and China—assuming that the United Kingdom (UK) would become the 12th member country of CPTPP. The actual impact of those scenarios would be studied based on the magnitudes of tariff reductions in line with the outcomes of those negotiations.

III. Estimated economic impact

The estimated real GDP impact of the alternative scenarios is shown in Table 1. If India joined RCEP or CPTPP, India's real GDP would increase in all five of the scenarios examined here. Real GDP is estimated to increase by 1.63% with India joining CPTPP, which is smaller than that with India joining RCEP (2.76%), but would exceed that with the US joining CPTPP (2.92%) and China joining CPTPP (3.52%).

The macroeconomic impact on the 11 CPTPP countries of India joining RCEP or CPTPP would be much smaller than that on India. Moreover, several CPTPP members

[2] Referred to in Horridge, Jerie, Mustakinov & Schiffmann (2018), GEMPACK Manual, ISBN 978-1-921654-34-3.

Table 1 Real GDP impact of India joining CPTPP in various configurations

(%)

	RCEP	CPTPP	after US	after China	after two
Australia	0.13	0.05	-0.01	0.09	0.03
New Zealand	0.06	0.03	-0.10	0.01	-0.12
Japan	-0.07	-0.09	-0.23	-0.15	-0.29
Brunei	0.07	-0.04	-0.13	0.02	-0.07
Malaysia	0.01	0.03	-0.11	-0.05	-0.18
Singapore	-0.06	-0.03	-0.21	-0.12	-0.29
Viet Nam	0.12	0.20	0.08	0.09	-0.03
Canada	-0.04	0.04	-0.00	0.01	-0.03
Mexico	-0.07	0.31	0.02	0.30	0.01
Chile	-0.00	0.01	-0.18	0.03	-0.16
Peru	-0.01	0.44	0.33	0.42	0.31
India	2.76	1.63	2.92	3.52	4.75
US	-0.06	-0.11	0.02	-0.15	-0.02
China	0.29	-0.08	-0.15	0.26	0.18
11 CPTPP counties	-0.02	0.05	-0.09	0.01	-0.12
15 RCEP countries	0.17	-0.07	-0.17	0.10	0.00
27 EU countries	-0.07	-0.10	-0.24	-0.14	-0.28

Source: Author's simulations.

are indicated to lose rather than gain due to trade diversion effects, i.e. replacement of trade between India and its existing EPA partners, resulting from trade creation between India and its new CPTPP partners. India has implemented bilateral and multilateral EPAs with Australia, Japan, the Association of Southeast Asian Nations (ASEAN) countries and Chile, shown in Table 1—those countries would face adverse trade diversion effects above.

Moreover, estimated results suggest that those adverse trade diversion effects would vary by country across the alternative policy scenarios examined here. Real GDP is estimated to decrease in Japan and Singapore in all five scenarios. If India joined RCEP, real GDP would also decrease in American countries, resulting in increases in the 15 RCEP countries as a whole, but in decreases in the 11 CPTPP countries. Conversely, real GDP would also decrease in Brunei under India joining CPTPP, which would result in increases in the 11 CPTPP countries as a whole but decreases in the 15 RCEP countries. Meanwhile, if India joined CPTPP after the US joined, many CPTPP countries would not gain, resulting in overall losses in the 11 CPTPP countries. On the other hand, if India joined CPTPP after China joined, many CPTPP countries would gain, resulting in overall gains in the 11 CPTPP countries. That said, if India joined CPTPP after the US and China joined, overall the 11 CPTPP members would lose rather than gain.

The impact of the five alternative scenarios on the production of selected sectors (representing land, labor and capital intensive users) is shown in Table 2 for major

Table 2 Impact on production, by sector

(billion US dollars)

	Agriculture, forestry and fisheries					Textiles and apparel					Motor vehicles				
	RCEP	CPTPP	USA	CHN	US CH	RCEP	CPTPP	USA	CHN	US CH	RCEP	CPTPP	USA	CHN	US CH
Australia	0.6	0.5	0.4	0.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China	2.1	-0.3	-0.9	1.8	1.2	1.8	-2.4	-7.8	0.3	-5.0	2.7	-2.2	-3.0	1.7	0.9
Japan	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.2	0.0	-0.7	-1.0	-1.1	-1.4
ASEAN	1.1	0.0	-0.5	0.0	-0.5	-0.8	-0.3	-1.7	-0.9	-2.4	-0.3	-0.6	-0.8	-0.9	-1.1
India	6.8	1.6	3.9	7.1	9.1	2.9	5.3	15.2	6.5	16.5	5.7	8.3	10.3	11.8	13.7
US	0.1	-0.1	1.3	0.0	1.4	-0.1	-0.6	-1.4	-0.6	-1.6	-0.9	-6.1	-5.6	-6.7	-6.2
Canada	0.0	1.7	1.6	1.8	1.7	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.9	-0.8	-1.0	-0.9
Mexico	0.0	0.0	0.1	0.1	0.1	0.0	0.0	-0.6	0.0	-0.6	-0.3	1.7	1.2	1.6	1.2
CPTPP	1.2	2.7	2.4	2.8	2.5	-0.3	-0.2	-1.8	-0.6	-2.2	-0.6	0.0	-0.8	-0.6	-1.4

Source: Author's simulations.

countries. India is indicated to gain in all three sectors specified here regardless of the comparative advantage/disadvantage of the economy. On the other hand, the prospect for impact in the other countries appears mixed, due to the general equilibrium mechanism of supply and demand working through changes in relative prices and other factors.

Agriculture, forestry and fisheries: Production would increase considerably in India across the five scenarios, and in Australia and Canada to a smaller extent, but would decrease in China if India joined CPTPP, especially after the US joined.

Textiles and apparel: Production would increase to the largest extent in India but would decrease in the ASEAN countries and the US. China's production would also decrease under India joining CPTPP, except in the after China joining scenario, but not under the US joining.

Motor vehicles: Production would increase to the largest extent in India; and in Mexico by a small amount under the four CPTPP scenarios; but would decrease substantially in the US, and to a lesser extent in Japan and Canada. China's production would decrease under India joining CPTPP without China.

IV. Concluding remarks

India is indicated to gain from joining RCEP and CPTPP with and/or without the US or China or both, both at macro levels and in key sectors—though several CPTPP countries and the US and China would not always gain from India joining CPTPP. Japan would not gain across the alternative scenarios at the macro level and would even lose in the production of motor vehicles, in which Japan would be expected to have comparative advantage. The potential economic impact of India joining regional trade agreements is worth studying, to support evidence based international trade policy making.